Appl. No. 10/607,729
Response Dated February 26, 2008
Reply to Office Action of September 26, 2007

Docket No.: 1020.P16727 Examiner: Qureshi, Afsar M. TC/A.U. 2616

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

- (Currently Amended) A multicarrier communication system, comprising:
 a transmitter having channel knowledge of a communication link to select a
 subcarrier that suffers from channel impairments from a plurality of subcarriers, wherein
 the selected subcarrier is punctured prior to transmission by placing no information in the
 selected subcarrier and transmitted power is re-allocated to information carrying
 subcarriers to increase the signal-to-noise ratio of the communication link.
- (Original) The system of claim 1 wherein the transmitter is an Orthogonal Frequency Division Multiplexing (OFDM) transmitter.
- (Original) The system of claim 1 wherein the channel knowledge is determined by the transmitter.
- (Original) The system of claim 1 further comprising:
 a receiver coupled to the transmitter where the receiver determines the channel knowledge.
- (Previously Presented) The system of claim 1 wherein the channel knowledge is selected from multipath fading and in-band interference.
- (Original) The system of claim 1 wherein the subcarrier is punctured by placing energy in the subcarrier without including any modulated data or information.

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 TC/A,U, 2616

 (Original) The system of claim 1 wherein the subcarrier is punctured and a Peakto-Average Power Ratio (PAPR) of an OFDM symbol is reduced.

 (Original) The system of claim 1 wherein the subcarrier is punctured by placing no energy in the punctured subcarrier and a power level for remaining subcarriers is maintained.

(Canceled).

- (Original) The system of claim 1 wherein the subcarrier is punctured to avoid inband spectral interference.
- 11. (Currently Amended) A communications device comprising:

 a transmitter to perform multi-carrier modulation and having channel knowledge
 of a communication link to select a carrier from a plurality of carriers to puncture prior to
 transmission by placing no information in the selected subcarrier and transmitted power
 is re-allocated to information carrying subcarriers to increase the signal-to-noise ratio of
 the communication link.
- 12. (Original) The communications device of claim 11 wherein the carrier is punctured by placing energy in the carrier without including any modulated data or information.
- (Original) The communications device of claim 11 wherein the carrier is punctured and a Peak-to-Average Power Ratio (PAPR) of a symbol is reduced.
- 14. (Original) The communications device of claim 11 wherein the carrier is punctured by placing no energy in the punctured carrier and a power level for remaining carriers is maintained.

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15. (Original) The communications device of claim 11 wherein the carrier is punctured and power is redistributed to remaining carriers.

- 16. (Original) The communications device of claim 11 wherein the carrier is punctured to avoid in-band spectral interference.
- (Currently Amended) A system comprising:
 an analog transceiver having at least one receiver chain to demodulate a subcarrier;
- a processor coupled to the at least one receiver chain to select a subcarrier from a plurality of subcarriers to puncture prior to transmission based on channel knowledge of a communication link where no information is placed in the selected subcarrier and transmitted power is re-allocated to information carrying subcarriers to increase the signal-to-noise ratio of the communication link; and
 - a Static Random Access Memory (SRAM) memory coupled to the processor.
- 18. (Original) The system of claim 17, wherein the processor further includes: an Orthogonal Frequency Division Multiplexing (OFDM) transmitter having a carrier puncturing circuit with an input to receive channel knowledge information.
- 19. (Original) The system of claim 18 wherein the carrier puncturing circuit receives channel knowledge information about in-band spectral interference to puncture a subcarrier.
- (Original) The system of claim 17 wherein the processor further includes:

 an Orthogonal Frequency Division Multiplexing (OFDM) receiver having a carrier depuncturing circuit that receives information about subcarriers to skip.